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ARTIFICIAL INTELLIGENCE AS A TOOL OF DIGITAL CRIMINOLOGY

ШТУЧНИЙ ІНТЕЛЕКТ ЯК ІНСТРУМЕНТ ЦИФРОВОЇ КРИМІНОЛОГІЇ

Kononenko V. D.
Doctor of Law Sciences, Associate Professor, Professor at the Department of International Law and the Rights of the European Union State Tax University Irpin, Kyiv region, Ukraine; Associate Professor at the Department of International Economic Relations and Tourist Business V. N. Karazin Kharkiv National University Kharkiv, Ukraine

Кононенко В. Д.
доктор юридичних наук, доцент, професор кафедри міжнародного права та права Європейського Союзу Державний податковий університет м. Ірпінь, Київська область, Україна; доцент кафедри міжнародних економічних відносин та туристичного бізнесу Харківський національний університет імені В. Н. Каразіна м. Харків, Україна

Didenko O.
Postgraduate Student State Tax University Irpin, Kyiv region, Ukraine

Діденко О.
аспірант Державний податковий університет м. Ірпінь, Київська область, Україна

The introduction of innovative technologies is transforming crime investigation and prevention methods, increasing their effectiveness. Artificial intelligence, automated analytical systems, and digital criminological approaches accelerate crime detection, identify patterns, and predict offender behavior, contributing to prevention at various stages. These technologies reduce the human factor in analytics, enhance data accuracy, and optimize the time of law enforcement agencies by directing resources toward more complex tasks. In the global context, the integration of these solutions into international cooperation ensures the prompt exchange of information and coordination of actions [3, p. 45].

The use of digital technologies and information systems improves the efficiency of law enforcement agencies, expanding the possibilities of crime prevention, automating investigative procedures, and providing consultative support. Modern ICT enhances investigative processes and strengthens community safety. However, certain risks arise: data security breaches, ethical dilemmas, and technological dependency. Strategic

forecasting involves analyzing the prospects of pre-trial investigations, modeling the consequences of procedural decisions using digital technologies, and planning measures for modern evidence gathering [4, p. 59].

The development of digital technologies has radically changed the nature of criminal investigations and judicial proceedings [16, p. 97–98]. An analysis of the structure of the criminogenic environment demonstrates the need to introduce comprehensive mechanisms for crime prevention based on the principles of forecasting and timely intervention [5, p. 23]. By contrast, the European Union is founded on fundamental rights that ensure the protection of human freedom and autonomy. Artificial intelligence technologies must not unjustifiably subjugate, deceive, manipulate, coerce, or induce individuals to take actions with negative consequences [8, p. 144]. Therefore, experts call for caution in the development and use of AI within the Council of Europe and the EU [15]. The European Parliament notes that AI will contribute to improving the methods of police and judicial work, as well as to more effective combating of certain types of crime [14, p. 85]. The European strategy is characterized by the search for a balance between public and private interests [6, pp. 20–21]. Bringing an offender to justice solely for reasons of expediency is dangerous, and for a law enforcement body it is unacceptable to justify violations of public order by political or other interests [7, p. 17].

There are many well-founded concerns about AI, ranging from its impact on jobs to its use in autonomous weapons systems and even the potential risk of superintelligence. However, pessimistic forecasts often fail to take into account the potential benefits of AI [13]. The application of digital technologies in criminological research is a promising direction for the development of modern criminological science, contributing to the emergence of digital criminology [2, p. 50]. Digital criminology, a new branch of criminological science, offers innovative methods of analyzing, understanding, and regulating crime through the use of digital technologies. This discipline goes beyond academic study, gaining practical significance in security management, requiring an interdisciplinary approach to balance innovation and human rights, and rethinking crime control in the digital age [14, p. 69].

The tools of digital criminology are digital technologies and analytical methods used to study, monitor, and predict crime, detect new forms of behavior, assess risks, and enhance the effectiveness of police prevention.

The use of AI extends to various stages of the criminal process. For example, there is increasing use of risk assessment algorithms to predict recidivism and make decisions regarding parole or pretrial detention. Examples include the Hart algorithm in the United Kingdom and the

COMPAS system in the United States [14, p. 85-86]. Digital criminology and criminological forecasting form complementary components within the system of modern criminal law counteraction to crime in the context of digital transformation: the former provides an in-depth understanding of emerging forms of crime, while the latter develops tools for its prevention.

Today, a number of countries are already actively using AI to create expert systems [1, p. 377], which should be based on European standards, norms, and recommendations.

The development and application of modern technologies in law enforcement activities to combat crime include: 1) information and analytical support; 2) reference support for agencies; 3) creation of systems for operational and investigative work; 4) improvement of video surveillance; 5) protection of facilities; 6) formation of departmental systems; 7) implementation of educational systems; 8) creation of a telecommunications system for pre-trial investigation (11, p. 135-140). Recent research in the field of advanced digital technologies indicates the successful use of artificial intelligence for predicting criminal offenses, based on modern analytical methods (9, pp. 134-138). Crime prediction is the process of identifying risk behavior that may potentially pose a threat in the future. At the same time, such an approach requires particular accuracy, as an erroneous assessment may lead either to unjustified restriction of an individual's freedom or to inadequate response in cases where a person poses a real danger (12, p. 342). The use of artificial intelligence in judicial proceedings without the prior development of reliable legal safeguards and control mechanisms is premature, as algorithmic systems are unable on their own to ensure compliance with the basic principles of the rule of law, fairness, and impartiality.

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